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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,911	02/28/2002	Kevin Lee	035451-0180 (3728.Palm)	1793

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 12/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,911

Applicant(s)

KEVIN ET AL.

Examiner

Abbas I Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6 and 18-19, rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (USPN 6262785) in view of Sakai et al. (USPN 5510809).

Regarding claims 1 and 18, Kim teaches a portable display device in a fully expanded state. Kim discloses that the device comprises a main body (101), an extension portion (103), a first LCD section (107), a second LCD section (109) such that the extension portion (103) can be fully expanded in order that the same is substantially on the same plane with the main body (101), or folded completely over the main body (101). See col. 2, lines 60-67 and col. 3, lines 1-10. Kim discloses that the sliding bars (113) of the LCD section (107) fitted into the slide grooves (115) of the main body (101) such that the LCD section (107) is able to slide in a longitudinal direction of the main body (101) (col. 3, lines 50-63, and Fig. (3-5). Kim further teaches a hinge connection (col. 3, line 1) and a slide grip (117), which is manipulated by the user to control the sliding of both LCD sections (107, 109). See col. 3, lines 64-67 and Fig. 2. However, Kim does not teach a sensor coupled to the processor such that the sensor is configured to provide a signal representative of the size of the display. Sakai on the other hand teaches a controller CL including a display device (10) and operation keyboard KB positioned around the display device (10) with a plurality of keys KY1-KY10. For example, Sakai teaches that key KY7 is assigned

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the function of a panel expansion key for instructing the panel expansion to be displayed on the display device (10). See col. 3, lines 60-67. Further Sakai teaches that the controller comprises a display controller means (9) for controlling the panel display and panel expansion on the display device (10). See col. 4, lines 18-21.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kim's portable display device to adapt Sakai's display control means (9). One would have been motivated in view of the suggestion in Sakai that the display control means (9) along with the assigned key KY7 as configured in Fig. 2 is functionally equivalent to the desired sensor. The use of a display controller helps function a display device as taught by Sakai.

Regarding claims 6 and 19, Kim teaches means for securely maintaining the extension portion (103) in a state of folded over the main body (101). See col. 3, lines 19-22.

2. Claims 7-8 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Sakai and in further view of Macuka (USPN 4171585).

Regarding claim 8, Macuka teaches a display device (Fig. 1) and detail view of a roller holder (Fig. 4) including slidable slots (121, 123). It would have been obvious an aperture can be arranged and it is matter of design analogous to the slots.

Kim as modified has been described above. However, Kim does not teach expandable display that includes a rollable display. Macuka on the other hand teaches an improved roll display device including a pair of roll mounting members (3) carried by a frame (5), which is extendable and mounted to a frame support (7). See col. 2, lines 28-32 and Fig. 1.

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Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kim's modified display system to adapt Macuka's rollable structure. One would have been motivated in view of the suggestion in Macuka the rollable structure as configured in Fig. 1 is the same as the desired rollable display. The use of rollable structure helps function a roll display device as taught by Macuka.

3. Claims 2-5, 14-17 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Sakai and Kung et al. (USPN 6570583).

Regarding claims 14 and 26, Kim and Sakai have been discussed. In addition, Kim teaches a slide grip (117) which is manipulated by the user to control the sliding of LCDs (107, 109). See col. 3, lines 64-67. It would have been obvious that the slide grip can be used to achieve the desired resizing.

However, Kim does not teach a means of reformatting a displayed image. Kung on the other hand teaches a display program (37) processing a zoom in, zoom out and key signals (col. 3, lines 22-24). Referring to Fig. 3 and Fig. 5, Kung shows a display program (37) determining the contents of the display (34), which must be scrolled down and reformatted to display a new line of information (32). See col. 3, lines 32-39.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was to modify Kim's portable display system to incorporate Kung's display program (37). One would have been motivated in view of the suggestion in Kung that the display program

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(37) equivalently provides the desired reformatting of the displayed image. The use of a display program (37) helps function a handheld display device as taught by Kung et al.

Regarding claim 2, see Kung's Fig. 4 (37).

Regarding claims 3, 15-16 and 27-28, Kung teaches that by rotating the zoom control knob (48) backwards, zoom out signals are sent causing the display program (37) to reduce the size of the font enabling more lines of information (32) to be shown on the display (34).

Regarding claims 4-5, 17, and 29, Kung teaches that the user can rotate the zoom control knob (48) forward to zoom in on the contents of the display (34) making the information larger on the screen and hence displaying less information. It would have been obvious neither zoom in nor zoom out. It would have been obvious that neither zoom in nor zoom out would bring no change and hence would leave the same information

4. Claims 9-13 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Sasaki and in further view of Petrich (USPN 6104379).

Kim as modified has been discussed above. However, Kim does not teach the size of display with respect to a sensor, the type of which includes a hinge sensor, electro-textile sensor, an electrical sensor and optical sensor. Petrich on the other teaches a hand sensing joint-link devices with a monitor (104) displaying graphical representation (105) as shown in Fig. 1A. Petrich discloses that the joint may be modified to accommodate the physical and optical,

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electrical, magnetic or other sensing phenomena required to detect articulation of the joint. See col. 17, lines 46-53.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kim's portable display system to include Petriche's use of a variety of sensors. One would have been motivated in view of the suggestion in Petrich that the use of optical, magnetic electrical and other sensors equivalently satisfy the desired optical, magnetic, electrical, hinge and electro-textile sensors. The use of a variety of sensors helps function a display system with hand sensing device as taught by Petrich et al.

Conclusion

5. The prior art made of record and not relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat. No. 6,427,857 to Adams et al.

U.S. Pat. No. 6,313,877 to Anderson

U.S. Pat. No. 5,826,397 to Arnold

U.S. Pat. No. 5,477,631 to Hewitt

U.S. Pat. No. 5,351,843 to Wichman et al.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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November 18, 2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600